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Ms. Irene M. Dale
Environmental Engineer
Bureau of Waste Site Cleanup
Massachusetts Department of Environmental Protection
205B Lowell Street
Wilmington, MA 01887

Geotechnical
Environmental and
Water Resources
Engineering

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NORTHEAST REGIONAL OFFICE

Dear Ms. Dale:

Re: Monthly Remedial Monitoring Report No. 6A
Capuano Center and Residences
50 Tufts Street Site
Somerville, MA
RTN 3-23246 (eDEP Transaction #149637)

On behalf of UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. is submitting this Remedial Monitoring Report (RMR) No. 6A for the operation of Active Remedial Systems associated with 50 Tufts Street in Somerville, Massachusetts (Site), Figure 1. The Massachusetts Department of Environmental Protection (DEP) assigned Release Tracking Number (RTN) 3-23246 to the Site.

RMR No. 6A covers the monitoring period from September 1 to September 30, 2007. This RMR was prepared to meet the requirements of the Massachusetts Contingency Plan (MCP) (310 CMR 40.0000). The original Immediate Response Action (IRA) Transmittal Forms (BWSC105, BWSC105A, and BWSC105B) was submitted by eDEP, and a copy is provided in Attachment A. BWSC105 has been completed to reflect current and historic immediate response actions performed at the Site to date.

This RMR addresses remedial systems at the following locations (refer to Figure 2):

- The sub-slab depressurization system (SSDS) installed in January 2007 at the Michael E. Capuano Early Childhood Center (Center) located at 150 Glen Street.
- SSDSs installed from May through September 2007 at residential or commercial buildings at; 23 Tufts Street, 31-33 Knowlton Street, 95 Franklin Street, 95R Franklin Street, 18 Morton Street, and 103 Washington Street.

1. OPERATING STATUS OF ACTIVE REMEDIAL SYSTEM [310 CMR 40.0027(2)(A)]

RMR No. 6A describes monitoring associated with two Active Remedial Systems: (i) the Center SSDS; and (ii) the residential/commercial SSDSs.

1.1. Capuano Early Childhood Center

The Center SSDS was designed by GEI and installed by the T. Ford Company of Georgetown, Massachusetts. The system consists of pipes connected to a blower to draw vapors from beneath the building and discharge them through an exhaust pipe above the roof. All of the piping except

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3.2. Residences and Commercial Buildings

Residential and commercial building effluent concentrations were not monitored during this reporting period.

4. IDENTIFICATION OF DISCHARGES ABOVE PERMISSIBLE DISCHARGE CONCENTRATIONS [310 CMR 40.0027(2)(D)]

The regulatory requirements for off-gas treatment for remedial air emissions are presented in DEP's Policy No. WSC-94-150, "Off-Gas Treatment of Point-Source Remedial Air Emissions." The DEP policy states that off-gas contaminant treatment is not required for SSDSs that produce a total air emission rate of volatile contaminants of less than 100 pounds per year (lbs/yr). GEI calculated the total VOC air emission rates for the mitigation systems, which were presented in previous RMRs submitted to DEP.

4.1. Capuano Early Childhood Center

It is our opinion that the total VOC air emission rates of the SSDS at the Center does not exceed the criteria of 100 lbs/yr and therefore, does not require off-gas treatment.

4.2. Residences and Commercial Buildings

Total VOC air emission rates were calculated at individual buildings, in accordance with procedures confirmed by DEP. The total VOC air emission rates of each individual SSDS installed at residences and the commercial building does not exceed the criteria of 100 lbs/yr and therefore, does not require off-gas treatment.

5. RECOVERY RATES AND/OR VOLUMES [310 CMR 40.0027(2)(E)]

There is no vapor, liquid or solid recovery associated with the operation of the Active Remedial Systems.

6. DISCHARGE VOLUMES [310 CMR 40.0027(2)(F)]

The volume of effluent discharged is not calculated as part of the operation of these Active Remedial Systems.

7. DATE, LOCATION, TYPE AND VOLUME OF REMEDIAL ADDITIVES APPLICATIONS [310 CMR 40.0027(2)(G)]

No remedial additives have been applied as part of these Active Remedial Systems.

8. GROUNDWATER DATA [310 CMR 40.0027(2)(H)]

No groundwater data has been collected as part of these Active Remedial Systems.

9. RELATED MAPS, GRAPHS OR DIAGRAMS [310 CMR 40.0027(2)(I)]

Related tables, maps and inspection logs are included as attachments and referenced in this report.

Please contact me at (781) 721-4012 or at igladstone@geiconsultants.com if you have any questions regarding this RMR No. 6A.

Very truly yours,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP
Vice President

ISG:jah

Attachments:

Table 1:	Summary of Monitoring Events – Capuano Center
Table 2:	PID Monitoring Data – Capuano Center
Table 3:	Summary of Testing Results – Indoor Air Samples – Capuano Center
Table 4:	Summary of Testing Results – Indoor Air Samples – 95R Franklin Street
Figure 1:	Site Location Map
Figure 2:	50 Tufts Street Site Plan
Figure 3:	Capuano Center Site Plan
Attachment A:	BWSC105, BWSC105A and BWSC105B
Attachment B:	Weekly Mechanical Inspection Logs for Capuano Center
Attachment C:	Graphs of SSDS and Sub-Slab Total VOC Concentrations

c: John Badey, UniFirst Corporation
Peter Mills, City of Somerville

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Table 1
Summary of Monitoring Events: September 1 to September 30, 2007
Capuano Center
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (yes/no)?
9/7/2007	1	SSDS Weekly Mechanical Inspection	-Pressure and VOC concentrations at each manifold pipe, the combined influent, and effluent pipes -System Flow Rate	No
9/10/2007	2	SSDS Monthly Monitoring	-Pre-sampling HVAC inspection -Pressure and VOC concentrations at interior sub-slab monitoring points -Pressure and VOC concentrations at exterior extraction pipes. -Pressure and VOC concentrations at manifold pipes, combined influent, and effluent pipes. -System Flow Rate	Yes
9/25/2007	3	SSDS Weekly Mechanical Inspection	-Pressure and VOC concentrations at each manifold pipe and effluent pipes -System Flow Rate	No
9/30/2007	4	SSDS Weekly Mechanical Inspection	-Pressure and VOC concentrations at each manifold pipe and effluent pipes -System Flow Rate	No

Notes:
1. RMR = Remedial Monitoring Report.
2. SSDS = Sub-Slab Depressurization System.
3. VOCs = Volatile Organic Compounds.
4. HVAC = Heating, Ventilation, and Air Conditioning system.
5. VOC measurements collected with a ppb-RAE calibrated to 10 ppm isobutylene.
6. Pressure readings collected using a Dwyer 475-000-FM manamoter.

Table 2
PID Monitoring Data: Septmber 1 to September 30, 2007
Capuano Center
Sommerville, MA

Date	Interior Sub-Slab Monitoring Points						Blower Enclosure Monitoring Points				
	Room 122A	Room 126A	Room 133A	Room 137A	Room 142A	Room 146A	Manifold 12	Manifold 13	Manifold 14	Combined Influent	Effluent
1/31/07	440	641	469	800	412	3,400	NM	NM	NM	NM	NM
2/1/07	492,000	305,000	975,000	1,244,000	210	331,000	NM	NM	NM	NM	NM
2/2/07	1,700	6,200	4,000	2,400	11,100	47,000	0	0	1,100	2,000	1,400
2/3/07	1,328	5,468	2,081	1,328	1,743	2,213	183	652	317	1,090	785
2/4/07	746	4,750	297	652	1,255	2,565	241	436	328	528	456
2/5/07	272	1,951	1,164	1,595	1,955	1,538	213	474	412	483	472
2/6/07	613	3,563	1,299	1,967	2,412	12,100	285	4,479	787	633	669
2/7/07	NM	NM	NM	NM	NM	NM	1,715	993	1,385	738	979
2/8/07	974	3,392	933	1,399	786	4,395	118	147	153	192	180
3/1/07	NM	NM	NM	NM	NM	NM	800	1,000	1,000	800	1,000
3/8/07	417	580	441	270	151	1,176	958	425	602	534	428
3/14/07	NM	NM	NM	NM	NM	NM	22	273	111	163	86
3/22/07	NM	NM	NM	NM	NM	NM	144	0	0	0	1,058
3/29/07	NM	NM	NM	NM	NM	NM	85	0	0	0	600
4/6/07	NM	NM	NM	NM	NM	NM	21	115	70	43	41
4/27/07	195	14,000	4,145	6,150	1,250	3,725	37	169	152	151	128
5/4/07	NM	NM	NM	NM	NM	NM	330	220	280	170	200
5/11/07	NM	NM	NM	NM	NM	NM	389	57	356	245	60
5/18/07	200	10,300	430	520	420	415	40	90	83	75	50
5/25/07	NM	NM	NM	NM	NM	NM	1,150	500	560	700	681
6/1/07	NM	NM	NM	NM	NM	NM	6,150	8,000	7,565	5,413	6,122
6/8/07	NM	NM	NM	NM	NM	NM	95	103	125	35	47
6/15/07	NM	NM	NM	NM	NM	NM	153	203	236	175	190
6/22/07	NM	NM	NM	NM	NM	NM	31	106	154	93	83
7/6/07	NM	NM	NM	NM	NM	NM	1,982	468	0	0	0
7/13/07	NM	NM	NM	NM	NM	NM	28	23	36	15	0
7/30/07	800	50	90	53	0	36	191	247	267	137	171
8/6/07	NM	NM	NM	NM	NM	NM	91	277	136	192	145
8/10/07	NM	NM	NM	NM	NM	NM	0	16	26	1	0
8/20/07	NM	NM	NM	NM	NM	NM	0	0	0	0	27
8/24/07	NM	NM	NM	NM	NM	N	NM	NM	NM	NM	110
9/7/07	NM	NM	NM	NM	NM	NM	261	300	340	300	260
9/10/07	27	175	8	842	0	17	98	207	319	261	310
9/25/07	NM	NM	NM	NM	NM	NM	0	0	0	0	0
9/30/2007	NM	NM	NM	NM	NM	NM	120	150	240	190	185

General Notes:
1. All measurements were collected with a photoionization detector (PID), calibrated to isobutylene, and shown in parts per billion by volume (ppbv).

Qualifying Notes:
NM = Not Measured

Table 3
Summary of Testing Results - Indoor Air Samples
Michael E. Capuano School, 150 Glen Street
Somerville, Massachusetts

	Sample Location:	Cafetorium		Room 101C				Room 108				Room 121		Room 122				Room 125			
	Sample Name:	150 Glen-Caf		150 Glen Room 101A		150 Glen Room 101B		150-Glen-Room 108A		150-Glen-Room 108B		150-Glen-Room 121		150-Glen-Room 122		150-Glen-Rm 122		150 Glen-Room 125A		150 Glen-Room 125B	
	Sample Date:	1/6/2007		12/27/2006		12/28/2006		12/27/2006		12/28/2006		1/6/2007		1/6/2007		2/7/2007		12/27/2006		12/28/2006	
	Collected By:	GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI	
	Units:	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
Analyte	**Method**																				
Volatile Organic Compounds (VOCs)	TO-15																				
Carbon tetrachloride		0.49 JS	0.078 JS	< 1.3	< 0.20	< 1.3	< 0.20	0.94 J	0.15 J	< 1.3	< 0.20	0.52 JS	0.082 JS	0.51 JS	0.081 JS	0.69 J	0.11 J	1.0 J	0.16 J	< 1.3	< 0.20
1,1-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
1,1-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
cis, 1,2-Dichloroethene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethylene (PCE)		0.88 JS	0.13 JS	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/m^3 = micrograms per cubic meter.
3. ppbV = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

L The reported result is estimated because the calculated relative percent difference (RPD) between a sample and the matrix duplicate was above the quality control limit specified in the Quality Assurance Project Plan (QAPP).

S The result is estimated due to Internal Standard recovery outside of the control limits.

Table 3
Summary of Testing Results - Indoor Air Samples
Michael E. Capuano School, 150 Glen Street
Somerville, Massachusetts

Sample Location:		Room 126																Room 134			
Sample Name:		150 Glen-Room 126		150 Glen-Room 100 (Field Duplicate of 150 Glen-Room 126)		150 Glen-Rm 126		150 Glen-Rm 126		150 Glen-Rm 126		150 Glen-Rm 126		150 Glen-Rm 126		150 Glen-Rm 126		150 Glen-Room 134		150 Glen-Rm 134	
Sample Date:		1/13/2007		1/13/2007		2/7/2007		3/8/2007		4/20/2007		5/17/2007		7/30/2007		9/10/2007		1/13/2007		2/7/2007	
Collected By:		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI	
Units:		ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m3	ppbV	ug/m3	ppbV	ug/m3	ppbV	ug/m3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
Analyte	**Method**																				
Volatile Organic Compounds (VOCs)	TO-15																				
Carbon tetrachloride		0.69 J	0.11 J	0.63 J	0.10 J	0.94 J	0.15 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.60 J	0.095 J	0.69 J	0.11 J	0.75 J	0.12 J	0.94 J	0.15 J
1,1-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
1,1-Dichloroethylene		< 0.79	< 0.20	< 0. 79	< 0.20	< 0. 79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
cis, 1,2-Dichloroethene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethylene (PCE)		0.88 J	0.13 J	0.75 J	0.11 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	3.2	0.47	< 1.4	< 0.20
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	0.54 J	0.10 J	< 1.1	< 0.20

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/m^3 = micrograms per cubic meter.
3. ppbV = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

L The reported result is estimated because the calculated relative percent difference (RPD) between a sample and the matrix duplicate was above the quality control limit specified in the Quality Assurance Project Plan (QAPP).

S The result is estimated due to Internal Standard recovery outside of the control limits.

Table 3
Summary of Testing Results - Indoor Air Samples
Michael E. Capuano School, 150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 136		Room 137				Room 138													
	Sample Name:	150 Glen-Room 136		150 Glen-Room 137A		150 Glen-Room 137B		RM138		150 Glen-Room 138		150 Glen-Room 138		150 Glen-Room 138 (Alpha Dupliate of 150 Glen-Room 138)		150 Glen-Rm 138		150 Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138)		150-Glen-Rm 138	
	Sample Date:	1/13/2007		1/6/2007		1/6/2007		1/2/2007		1/6/2007		1/13/2007		1/13/2007		2/7/2007		2/7/2007		3/8/2007	
	Collected By:	GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI	
	Units:	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
Analyte	Method																				
Volatile Organic Compounds (VOCs)	TO-15																				
Carbon tetrachloride		0.69 J	0.11 J	0.52 JS	0.082 JS	< 1.3	< 0.20	< 1.3	< 0.20	0.49 JS	0.078 JS	0.82 J	0.13 J	< 0.126	< 0.020	0.75 J	0.12 J	0.52 J	0.082 J	< 1.3	< 0.20
1,1-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	0.45 J	0.11 J	0.77 JS	0.19 JS	0.57 J	0.14 J	< 0.081	< 0.020	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
1,1-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	2.1 S	0.54 S	< 0.79	< 0.20	< 0.079	< 0.020	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.0819	< 0.020	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
cis, 1,2-Dichloroethene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	0.83 S	0.21 S	< 0.79	< 0.20	< 0.079	< 0.020	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethylene (PCE)		2.1	0.31	< 1.4	< 0.20	< 1.4	< 0.20	14	2	60 S	8.8 S	20	3	32.6	4.8	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.109	< 0.020	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	2.3	0.42	7 S	1.3 S	3.1	0.57	4.26	0.794	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/m^3 = micrograms per cubic meter.
3. ppbV = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

L The reported result is estimated because the calculated relative percent difference (RPD) between a sample and the matrix duplicate was above the quality control limit specified in the Quality Assurance Project Plan (QAPP).

S The result is estimated due to Internal Standard recovery outside of the control limits.

Table 3
Summary of Testing Results - Indoor Air Samples
Michael E. Capuano School, 150 Glen Street
Somerville, Massachusetts

Sample Location:		Room 138 (continued)																	
Sample Name:		150-Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138)		150-Glen-Rm 138		150-Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138)		150-Glen-Rm 138		150-Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138)		150-Glen-Rm 138		150-Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138)		150-Glen-Rm 138		150-Glen-Rm 139 (Field Duplicate of 150-Glen-Rm 138)	
Sample Date:		3/8/2007		4/20/2007		4/20/2007		5/17/2007		5/17/2007		7/30/2007		7/30/2007		9/10/2007		9/10/2007	
Collected By:		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI	
Units:		ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
Analyte	**Method**																		
Volatile Organic Compounds (VOCs)	TO-15																		
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.61 J	0.097 J	0.69 J	0.11 J	0.69 J	0.11 J	0.69 J	0.11 J
1,1-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
1,1-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
cis, 1,2-Dichloroethene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.17 J	1.1 J	0.16 J	< 1.4	< 0.20	6.5	0.96
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/m^3 = micrograms per cubic meter.
3. ppbV = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

L The reported result is estimated because the calculated relative percent difference (RPD) between a sample and the matrix duplicate was above the quality control limit specified in the Quality Assurance Project Plan (QAPP).

S The result is estimated due to Internal Standard recovery outside of the control limits.

Table 3
Summary of Testing Results - Indoor Air Samples
Michael E. Capuano School, 150 Glen Street
Somerville, Massachusetts

Sample Location:		Room 141												Room 142							
Sample Name:		150 Glen-Room 141		150-Glen-Rm 141		150-Glen-Rm 141		150-Glen-Rm 141		150-Glen-Rm 141		150-Glen-Rm 141		RM142		150 Glen-Room 142		150 Glen-Rm 142		150-Glen-Rm 142	
Sample Date:		1/6/2007		3/8/2007		4/20/2007		5/17/2007		7/30/2007		9/10/2007		1/2/2007		1/6/2007		2/7/2007		3/8/2007	
Collected By:		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI	
Units:		ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
Analyte	Method																				
Volatile Organic Compounds (VOCs)	TO-15																				
Carbon tetrachloride		0.45 JS	0.071 JS	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.75 J	0.12 J	< 1.3	< 0.20	0.52 JS	0.083 JS	0.82 J	0.13 J	< 1.3	< 0.20
1,1-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	1.4	0.35	1.2 S	0.29 S	< 0.81	< 0.20	< 0.81	< 0.20
1,1-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	0.87	0.22	2.5 S	0.63 S	< 0.79	< 0.20	< 0.79	< 0.20
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
cis, 1,2-Dichloroethene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	28	4.1	45 S	6.6 S	< 1.4	< 0.20	< 1.4	< 0.20
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	0.33 JS	0.061 JS	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	3.7	0.69	5.4 S	1 S	< 1.1	< 0.20	< 1.1	< 0.20

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/m^3 = micrograms per cubic meter.
3. ppbV = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

L The reported result is estimated because the calculated relative percent difference (RPD) between a sample and the matrix duplicate was above the quality control limit specified in the Quality Assurance Project Plan (QAPP).

S The result is estimated due to Internal Standard recovery outside of the control limits.

Table 3
Summary of Testing Results - Indoor Air Samples
Michael E. Capuano School, 150 Glen Street
Somerville, Massachusetts

Sample Location:		Room 142 (continued)								Room 144				Room 145		Room 146					
Sample Name:		150-Glen-Rm 142		150-Glen-Rm 142		150-Glen-Rm 142		150-Glen-Rm 142		150 Glen-Room 144 (Accutest Duplicate)		150 Glen-Room 144 (Alpha Duplicate)		150 Glen-Room 145		150-Glen-Room 146A		150-Glen-Room 146B		150-Glen-Room 146C (Field Duplicate of 150-Glen-Room 146B)	
Sample Date:		4/20/2007		5/17/2007		7/30/2007		9/10/2007		1/13/2007		1/13/2007		1/6/2007		12/27/2006		12/28/2006		12/28/2006	
Collected By:		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI		GEI	
Units:		ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
Analyte	Method																				
Volatile Organic Compounds (VOCs)	TO-15																				
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	0.63 J	0.10 J	0.75 J	0.12 J	0.88 J	0.14 J	< 3.14	< 0.50	0.45 JS	0.071 JS	1.1 J	0.18 J	< 1.3	< 0.20	0.49 J	0.078 J
1,1-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 2.02	< 0.50	< 0.81	< 0.20	10	2.5	3.6	0.88	3.3	0.82
1,1-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 1.98	< 0.50	< 0.79	< 0.20	7.9	2	4	1	3.9	0.99
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	1.0	0.25	< 0.81	< 0.20	< 0.81	< 0.20	<2.02	< 0.50	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
cis, 1,2-Dichloroethene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 1.98	< 0.50	< 0.79	< 0.20	3.3	< 0.83	1.3	0.33	1.2	0.31
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	4.1	0.61	4.36	0.643	< 1.4	< 0.20	186	27.5	83.4	12.3	85.4	12.6
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 2.72	< 0.50	< 1.1	< 0.20	2.1	0.38	0.82 J	0.15 J	0.71 J	0.13 J
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	1.3	0.24	< 2.68	< 0.50	< 1.1	< 0.20	37	6.8	10	1.9	11	2.1

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/m^3 = micrograms per cubic meter.
3. ppbV = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

L The reported result is estimated because the calculated relative percent difference (RPD) between a sample and the matrix duplicate was above the quality control limit specified in the Quality Assurance Project Plan (QAPP).

S The result is estimated due to Internal Standard recovery outside of the control limits.

Table 3
Summary of Testing Results - Indoor Air Samples
Michael E. Capuano School, 150 Glen Street
Somerville, Massachusetts

	Sample Location:	Room 146 (continued)															
	Sample Name:	RM146		150-Glen-Room 146		150-Glen-Rm 146		150-Glen-Rm 146		150-Glen-Rm 146		150-Glen-Rm 146		150-Glen-Rm 146		150-Glen-Rm 146	
	Sample Date:	1/2/2007		1/6/2007		2/7/2007		3/8/2007		4/20/2007		5/17/2007		7/30/2007		9/10/2007	
	Collected By:			GEI		GEI		GEI		GEI		GEI		GEI		GEI	
	Units:	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
Analyte	Method																
Volatile Organic Compounds (VOCs)	TO-15																
Carbon tetrachloride		0.63 J	0.10 J	< 1.3	< 0.20	0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.62 J	0.099 J	0.82 J	0.13 J
1,1-Dichloroethane		0.53 J	0.13 J	0.57 JS	0.14 JS	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
1,1-Dichloroethylene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
cis, 1,2-Dichloroethene		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethylene (PCE)		11	1.6	26 S	3.8 S	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.0 J	0.15 J	< 1.4	< 0.20
1,1,1-Trichloroethane		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		1.7	0.32	3 S	0.56 S	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/m^3 = micrograms per cubic meter.
3. ppbV = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

L The reported result is estimated because the calculated relative percent difference (RPD) between a sample and the matrix duplicate was above the quality control limit specified in the Quality Assurance Project Plan (QAPP).

S The result is estimated due to Internal Standard recovery outside of the control limits.

Table 4
Summary of Indoor Air Testing Results
95R Franklin Street
Somerville, Massachusetts

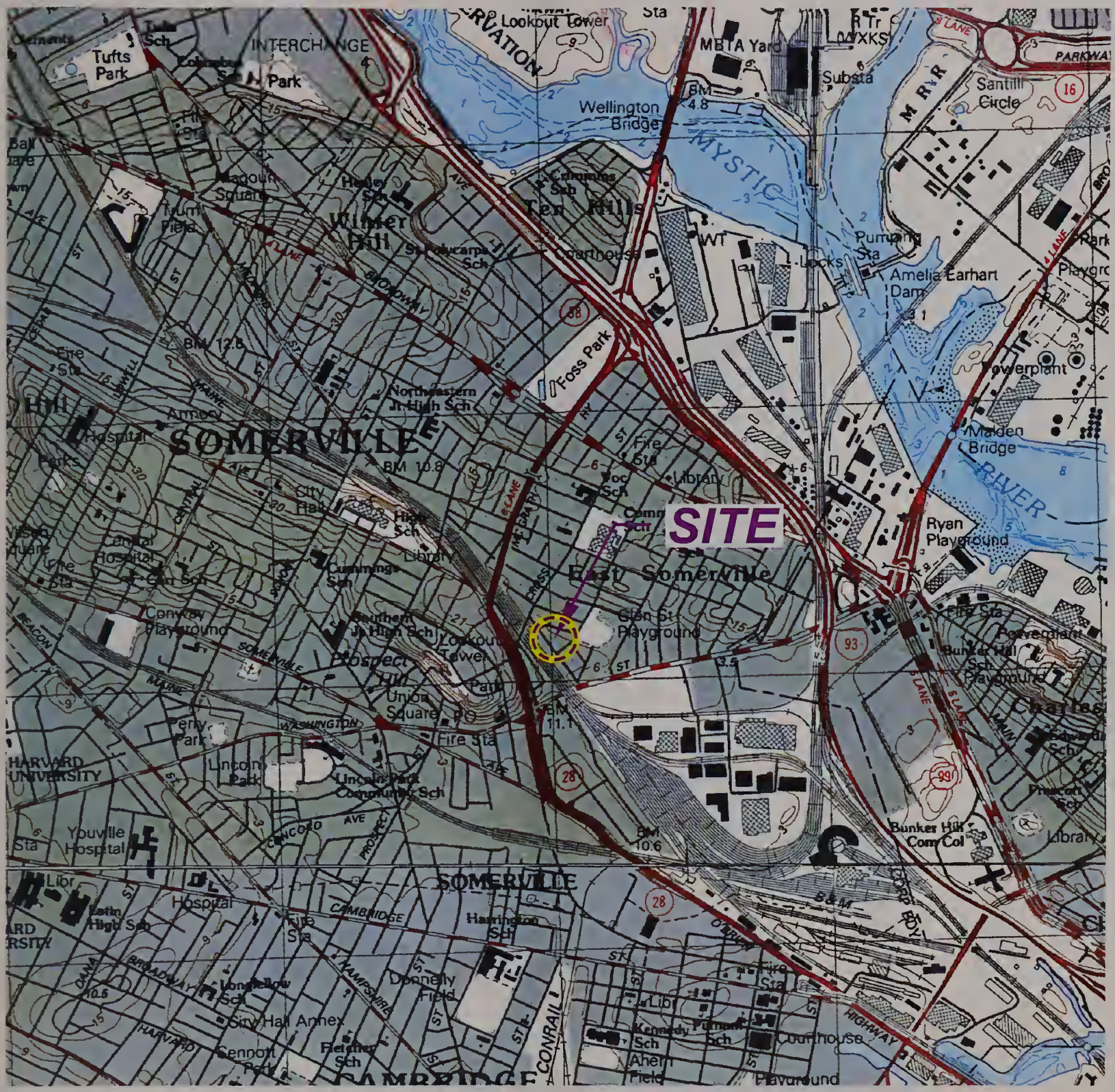
Sample Location:	95R Franklin Street			
Sample Name:	045162-95RFRANK-1		045162-95RFRANK-B	
Sample Date:	8/23/2007		8/23/2007	
Collected by:	GEI		GEI	
Units:	µg/m^3	ppbv	µg/m^3	ppbv
Analyte				
Volatile Organic Compounds (VOCs)				
Carbon tetrachloride	0.69 J	0.11 J	0.69 J	0.11 J
Tetrachloroethylene (PCE)	2.3	0.34	3.5	0.52

General Notes
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.

Qualifying Note:
J The reported result is below the laboratory reporting limit and is estimated.

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering



This Image provided by MassGIS is taken from
U.S.G.S. Topographic 7.5 X 15 Minute Series
Boston North, MA Quadrangle, 1985.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 3 Meters.

Remedial Monitoring Report No. 6A 50 Tufts Street Somerville, Massachusetts	GEI Consultants	SITE LOCATION MAP
UniFirst Corporation Wilmington, Massachusetts	Project 04516-2	October 2007 Fig. 1

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GENERAL NOTES:

1. BUILDINGS, STREET, AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
2. CAPUANO CENTER BUILDING IS BASED ON DRAWING A0.2 FROM THE ARCHITECTURAL BID SET OF "THE EDGERTY EARLY CHILDHOOD DEVELOPMENT CENTER" BY HMFH ARCHITECTS, INC., DATED AUGUST 10, 2001.

0 100 200
SCALE, FEET

Remedial Monitoring Report No. 6A
50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

50 TUFTS STREET SITE

Project 04516-2 | October 2007 | Fig. 2

N:\04516\#Drafting\045160-2\RMR No 6a\045160-2 - RMR No 6a - 02.dwg

GENERAL NOTES:

1. BUILDINGS, STREET, AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS MAPS.
2. CAPUANO CENTER BUILDING IS BASED ON DRAWING A0.2 FROM THE ARCHITECTURAL BID SET OF "THE EDGERTY EARLY CHILDHOOD DEVELOPMENT CENTER" BY HMFH ARCHITECTS, INC., DATED AUGUST 10, 2001.

MICHAEL E. CAPUANO
EARLY CHILDHOOD CENTER

GYMNASIUM

CAFETERIA

KITCHEN

121 121A 125 125A 133 133A 137 137A 141 141A 145 145A

122 122A 126 126A 134 134A 138 138A 142 142A 146 146A

GLEN STREET

DELL STREET

MORTON STREET

KNOWLTON STREET

6 153-155 159 163 154-152 156 21 19-19A 15-17 13 11 32 162-164 35-37 31-33 29

F

0 40 80

APPROXIMATE SCALE, FEET

Remedial Monitoring Report No. 6A
50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

CAPUANO CENTER
SITE PLAN

Project 04516-2 | October 2007 | Fig. 3

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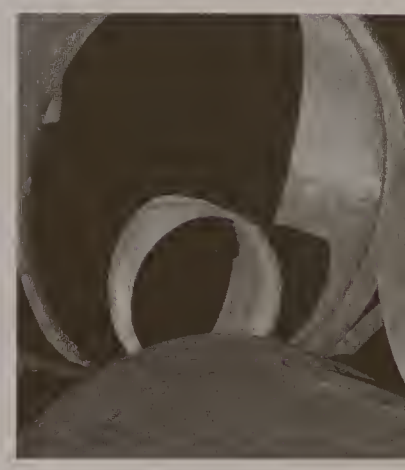
GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering



ATTACHMENT A

BWSC105, BWSC105A and BWSC105B

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number: 3 - 23246

A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: 50 TUFTS ST & PROP ACROSS THE ST

2. Street Address: 50 TUFTS ST

3. City/Town: SOMERVILLE 4. ZIP Code: 02145-4129

5. UTM Coordinates: a. UTM N: 4694322 b. UTM E: 328049

☐ 6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.
☐ a. Tier IA ☐ b. Tier IB ☑ c. Tier IC ☐ d. Tier II

☐ 7. Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114. Specify Program (check one):
☐ a. CERCLA ☐ b. HSWA Corrective Action ☐ c. Solid Waste Management
☐ d. RCRA State Program (21C Facilities)

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial IRA Written Plan (if previously submitted): 11/13/2006 (mm/dd/yyyy)

☐ 2. Submit an **Initial IRA Plan.**

☐ 3. Submit a **Modified IRA Plan** of a previously submitted written IRA Plan.

☐ 4. Submit an **Imminent Hazard Evaluation**. (check one)
☐ a. An Imminent Hazard exists in connection with this Release or Threat of Release.
☐ b. An Imminent Hazard does not exist in connection with this Release or Threat of Release.
☐ c. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.
☐ d. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

☐ 5. Submit a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard** .

☐ 6. Submit an **IRA Status Report**.

☑ 7. Submit a **Remedial Monitoring Report.** (This report can only be submitted through eDEP.)
a. Type of Report: (check one) ☐ i. Initial Report ☑ ii. Interim Report ☐ iii. Final Report
b. Frequency of Submittal: (check all that apply)
☑ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
☑ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
☐ iii. A Remedial Monitoring Report(s) submitted concurrent with a IRA Status Report.
c. Number of Remedial Systems and/or Monitoring Programs: 2

A separate BWSC105A, IRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number: 3 - 23246

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 8. Submit an **IRA Completion Statement.**

☐ a. Check here if future response actions addressing this Release or Threat of Release notification condition will be conducted as part of the Response Actions planned or ongoing at a Site that has already been Tier Classified under a different Release Tracking Number (RTN) . When linking RTNs, rescoring via the NRS is required if there is a reasonable likelihood that the addition of the new RTN(s) would change the classification of the site.

b. Provide Release Tracking Number of Tier Classified Site (Primary RTN): ☐ - ☐

These additional response actions must occur according to the deadlines applicable to the Primary RTN. Use the Primary RTN when making all future submittals for the site unless specifically relating to this Immediate Response Action.

☐ 9. Submit a **Revised IRA Completion Statement.**

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT IRA:

1. Identify Media Impacted and Receptors Affected: (check all that apply)

☑ a. Air ☑ b. Basement ☑ c. Critical Exposure Pathway ☑ d. Groundwater ☑ e. Residence

☐ f. Paved Surface ☐ g. Private Well ☐ h. Public Water Supply ☑ i. School ☐ j. Sediments

☐ k. Soil ☐ l. Storm Drain ☐ m. Surface Water ☐ n. Unknown ☐ o. Wetland ☐ p. Zone 2

☐ q. Others Specify: _____

2. Identify Oils and Hazardous Materials Released: (check all that apply)

☐ a. Oils ☑ b. Chlorinated Solvents ☐ c. Heavy Metals

☐ d. Others Specify: _____

_____

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

☐ 1. Assessment and/or Monitoring Only
☐ 2. Temporary Covers or Caps
☐ 3. Deployment of Absorbent or Containment Materials
☐ 4. Temporary Water Supplies
☐ 5. Structure Venting System
☐ 6. Temporary Evacuation or Relocation of Residents
☐ 7. Product or NAPL Recovery
☐ 8. Fencing and Sign Posting
☐ 9. Groundwater Treatment Systems
☑ 10. Soil Vapor Extraction
☐ 11. Bioremediation
☐ 12. Air Sparging

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number: 3 - 23246

D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☑ 13. Excavation of Contaminated Soils

☑ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards _____

☑ ii. Off Site Estimated volume in cubic yards 61

iia. Receiving Facility: STABLEX; QUEBEC CANADA Town: BOSTON State: MA

iib. Receiving Facility: _____ Town: _____ State: _____

iii. Describe: _____

☐ b. Store ☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

iia. Receiving Facility: _____ Town: _____ State: _____

iib. Receiving Facility: _____ Town: _____ State: _____

☐ c. Landfill

☐ i. Cover Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ ii. Disposal Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ 14. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____ Town: _____ State: _____

c. Receiving Facility: _____ Town: _____ State: _____

☑ 15. Removal of Other Contaminated Media:

a. Specify Type and Volume: SPENT GRANULAR ACTIVATED CARBON 8,000 LBS

b. Receiving Facility: RINECO Town: BENTON State: AR

c. Receiving Facility: _____ Town: _____ State: _____

☑ 16. Other Response Actions:

Describe: TEMPORARY AIR PURIFIERS AND/OR SUB-SLAB DEPRESSURIZATION SYSTEMS

☐ 17. Use of Innovative Technologies:

Describe: _____

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number
3 - 23246

E. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B of this form indicates that an* ***Immediate Response Action Plan*** *is being submitted*, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that an* ***Imminent Hazard Evaluation*** *is being submitted*, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation comply(ies) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> *if Section B of this form indicates that an* ***Immediate Response Action Status Report*** *and/or a* ***Remedial Monitoring Report*** *is(are) being submitted*, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that an* ***Immediate Response Action Completion Statement*** *or a request to* ***Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard*** *is being submitted*, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 9719

2. First Name: ILEEN S 3. Last Name: GLADSTONE

4. Telephone: 7817214012 5. Ext.: 6. FAX:

7. Signature: ILEEN S GLADSTONE

8. Date: 11/01/2007
(mm/dd/yyyy)

9. LSP Stamp:

Commonwealth of Massachusetts
Electronic Seal
Licensed Site Professional

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number: 3 - 23246

F. PERSON UNDERTAKING IRA:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☑ c. change in the person undertaking response actions
2. Name of Organization: UNIFIRST CORPORATION
3. Contact First Name: JOHN R. 4. Last Name: BADEY
5. Street: 68 JONSPIN ROAD 6. Title: VICE PRESIDENT
7. City/Town: WILMINGTON 8. State: MA 9. ZIP Code: 01887-0000
10. Telephone: 800 3477880 11. Ext.: 578 12. FAX:

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA:

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: OTHER PRPS

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking IRA Specify Relationship: _____

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this IRA, will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement. If this box is checked, you must submit one of the following plans, along with the appropriate transmittal form.

☐ a. A Release Abatement Measure (RAM) Plan (BWSC106) ☐ b. Phase IV Remedy Implementation Plan (BWSC108)

☐ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☑ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the implementation of an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.

☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the submittal of a Completion Statement for an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.

☐ 5. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to the DEP Regional Office.

☑ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number: 3 - 23246

I. CERTIFICATION OF PERSON UNDERTAKING IRA:

1. I, JOHN R. BADEY, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: JOHN R. BADEY (Signature) 3. Title: VICE PRESIDENT

4. For: UNIFIRST CORPORATION (Name of person or entity recorded in Section F) 5. Date: 11/01/2007 (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on

11/2/2007 9:32:38 AM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105 A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Release Tracking Number: 3 - 23246

Remedial System or Monitoring Program: 1 of: 2

A. DESCRIPTION OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:

1. Type of Active Remedial System or Active Remedial Monitoring Program: (check all that apply)

☑ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery ☐ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption

☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption

☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation

☑ x. Other Describe: **SUB-SLAB DEPRESSURIZATION SYSTEM**

☐ b. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface ☐ ii. To Groundwater (Injection) ☐ iii. To the Surface

☐ c. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section F5)

☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe: _____

2. Mode of Operation: (check one)

☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer/POTW

☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient

☑ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☑ ii. No Off-gas Controls

☐ d. Drinking Water Supply

☐ e. Surface Water (including Storm Drains)

☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 9/1/2007 (mm/dd/yyyy) To: 9/30/2007 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe: _____

☑ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☐ ii. Quarterly

☑ iii. Other Describe: **TOTAL VOC - WEEKLY, INDOOR AIR - MONTHLY**

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit

☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): **WSC-94-150**

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Release Tracking Number: 3 - 23246

Remedial System or Monitoring Program: 1 of: 2

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: b. Grade:

c. License No.: d. License Exp. Date: (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: 30 b. GW Recovered (gals):

c. NAPL Recovered (gals): d. GW Discharged (gals):

e. Avg. Soil Gas Recovery Rate (scfm): 109.00 f. Avg. Sparging Rate (scfm) :

☑ 2. Remedial Additives: (check all that apply)

☑ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Release Tracking Number: 3 - 23246

Remedial System or Monitoring Program: 1 of: 2

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.) (check all that apply)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☑ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105B

Release Tracking Number
3 - 23246

IRA REMEDIAL MONITORING REPORT
EFFLUENT/DISCHARGE CONCENTRATIONS

Pursuant to 310 CMR 40.0400 (SUBPART D)

Remedial System or Monitoring Program: 1 of: 2

For each Point of Measurement, indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentraion (where applicable)	Midpoint Concentration (where applicable)	(check one) ☑ Discharge ☐ Groundwater Concentration	Check here, if ND/BDL	Permissible Concentration	Units	Within Permissible Limits? (Y/N)
SSDS	09/07/2007	TOTAL VOCS	0.300		0.260	☐	28.000	ppm	Yes
SSDS	09/10/2007	TOTAL VOCS	0.261		0.310	☐	28.000	ppm	Yes
SSDS	09/25/2007	TOTAL VOCS	0.000			☑	28.000	ppm	Yes
SSDS	09/30/2007	TOTAL VOCS	0.190		0.185	☐	28.000	ppm	Yes
						☐			
						☐			
						☐		

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105 A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Release Tracking Number: 3 - 23246

Remedial System or Monitoring Program: 2 of: 2

A. DESCRIPTION OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:

1. Type of Active Remedial System or Active Remedial Monitoring Program: (check all that apply)

☑ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery ☐ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption

☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption

☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation

☑ x. Other Describe: SUB-SLAB DEPRESSURIZATION SYSTEM

☐ b. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface ☐ ii. To Groundwater (Injection) ☐ iii. To the Surface

☐ c. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section F5)

☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe: _____

2. Mode of Operation: (check one)

☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer/POTW

☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient

☑ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☑ ii. No Off-gas Controls

☐ d. Drinking Water Supply

☐ e. Surface Water (including Storm Drains)

☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 9/1/2007 (mm/dd/yyyy) To: 9/30/2007 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe: _____

☑ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☐ ii. Quarterly

☑ iii. Other Describe: YEARLY

☑ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105 A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Remedial System or Monitoring Program: 2 of: 2

Release Tracking Number: 3 - 23246

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: b. Grade:

c. License No.: d. License Exp. Date: (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: 30 b. GW Recovered (gals):

c. NAPL Recovered (gals): d. GW Discharged (gals):

e. Avg. Soil Gas Recovery Rate (scfm): 95.00 f. Avg. Sparging Rate (scfm) :

☐ 2. Remedial Additives: (check all that apply)

☑ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105A

IRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0400 (SUBPART D)

Release Tracking Number: 3 - 23246

Remedial System or Monitoring Program: 2 of: 2

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.) (check all that apply)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☑ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering

ATTACHMENT B

Weekly Mechanical Inspection Logs for Capuano Center

Weekly Mechanical Inspection Log for Capuano Center

GENERAL INFORMATION			
GEI Field Representatives:	S. Slater		
Date:	09/07/07	Start-time of monitoring work:	10:30
Weather:	sunny, 80°	End-time of monitoring work:	11:05
		System Status:	ON

INSTRUMENTATION INFORMATION		
Instrument	PID (ppb)	Manometer (in H_20)
Manufacturer	Pro-Rae Systems	Dwyer
Model	ppb-RAE	Mark III-475-0000 Series
GEI Identification No.	PINE	NA
Calibrant	10 ppm Isobutylene	NA
Successful Calibration	Yes	Zeroed before each reading

FIELD MEASUREMENTS			
Shed Secure?	YES	**Discharge Pressure Port**	
Condensate Accumulated?	NO	**Velocity (ft/min)**	NM
		Pipe Diameter (ft)	0.33
Condensate Drained?	N/A	**Average Flow Rate (cfm)**	NM

Shed Pressure/VOC Measurements

Port ID	Typical Pressure Range	Pressure (in. H_2O)	Typcial Range of VOCs	VOC (ppb)
Manifold 12	-0.300 to -0.500	-0.357	0 to 2000	261
Maniforld 13	-0.300 to -0.500	-0.375	0 to 5000	300
Manifold 14	-0.300 to -0.500	-0.357	0 to 2000	340
Combined Influent	-0.600 to -0.700	-0.622	0 to 2000	300
Effluent	0.480 to 0.600	0.611	0 to 2000	260

Comments
Flow rate not measured.

Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 142 and 146.
2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft/min = feet per minute.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.

PRE-SAMPLING CHECKLIST

Date: 9/10/2007 **Time Period**: 15:45 – 20:15 **Field Person**: S. Slater, T. Daigle

Building Operating Parameter Verification

1. Confirm building operating schedule (global) set to 24 hr operation	Yes
2. Confirm outdoor air for all air handling units and unit ventilators set to minimum damper position via EMS	Minimum damper position at -41%.
3. Confirm general exhaust fans F2 and F5 remain off	Yes
4. Confirm RTU 1 RAF is set at 50%	Yes
5. Confirm RTU 1&2, AHU 1&2 operating	Yes

Building Pressure Verification

Location Description	Time	"H_2O
Franklin Street Exit	15:58	-0.025
Alley entrance at base of stairs	16:00	-0.025
Main entrance facing soccer field	16:01	-0.018
Glen St. entrance next to gymnasium	16:03	-0.020
Custodian entrance	16:06	-0.027

Sample Location Checklist

	Rm 126	Rm 138	Rm 141	Rm 142	Rm 146
Unit ventilator operating	Yes	Yes	Yes	Yes	Yes
UV min OA damper position (EMS)	41%	41%	41%	41%	41%
Unit ventilator fan speed	High	High	High	High	High –broken screw
Windows closed	Yes	Yes	Yes	Yes	Yes
Bathroom door closed	Yes	Yes	Yes	Yes	Yes
Bathroom exhaust operating	Yes, but very faint fan sound	Yes, but very faint fan sound	Yes, but very faint fan sound	No. Could not hear fan.	Yes
Room door closed	Yes	Yes	Yes	Yes	Yes
Pressure wrt outdoors	-0.029 to -0.031	-0.022 to -0.025	-0.017 to -0.020	-0.019 to -0.021	-0.026 to -0.028
Pressure wrt corridor	0.000	0.000	0.000	0.000	0.000

GENERAL INFORMATION

			Exterior	Interior
GEI Field Representatives:	T. Daigle	Start-time of monitoring work:	14:30	10:02
	S. Slater	End-time of monitoring work:	15:30	10:37
Date:	09/10/07	System Status:		
Weather:				

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	GEI Identification No.	Calibrant	Successful Calibration
PID (ppb)	Pro-Rae Systems	ppb-RAE	PINE	10 ppm Isobutylene	Yes
Manometer (in H_20)	Dwyer	Mark III-475-0000-FM	NA	NA	Zeroed before each reading
Hot Wire Thermo-Anemometer (ft/min)	Extech Instruments	407123	NA	NA	Zeroed before each reading

FIELD MEASUREMENTS

Exterior Extraction Monitoring Points

Monitoring Point Identification	Manometer Reading (in. H_2O)	PID Reading (ppb)
122-1	-0.228	28
122-2	-0.237	44
122-3	-0.235	72
126-1	-0.252	25
126-2	-0.216	25
126-3	-0.272	8
134-1	-0.349	11
134-2	-0.365	195
134-3	-0.341	154
138-1	-0.362	157
138-2	-0.367	177
138-3	-0.365	25
142-1	-0.271	74
142-2	-0.267	111
142-3	-0.248	536
146-1	-0.245	20
146-2	-0.239	42
146-3	-0.239	2

System Configuration

Extraction Point Valve Identification	Status (on/off?)
122-1	ON
122-2	ON
122-3	ON
126-1	ON
126-2	ON
126-3	ON
134-1	ON
134-2	ON
134-3	ON
138-1	ON
138-2	ON
138-3	ON
142-1	ON
142-2	ON
142-3	ON
146-1	ON
146-2	ON
146-3	ON

Interior Sub-Slab Monitoring Points

Monitoring Point Identification	Manometer Reading (in. H_2O)	PID Reading (ppb)
Room 122A	-0.033	27
Room 126A	-0.003	175
Room 133A	-0.003	8
Room 137A	0.000	842
Room 142A	-0.006	0
Room 146A	-0.014	17

Interior Ambient Air Measurements

Classroom	PID Reading (ppb)
122	0 - 1
126	0 -1
134	0
138	0 - 2
133	0
137	0 - 4
142	0 - 12
146	0 -1

Blower Enclosure Monitoring Points

	Manometer Reading (in. H_2O)	PID Reading (ppb)
Manifold 12[1]	-0.358	98
Manifold 13[1]	-0.387	207
Manifold 14[1]	-0.364	319
Combined Influent	-0.657	261
Effluent	0.542	310

Blower Condensation Cleanout? NA

Influent Flow

Velocity (ft/min)	1,458
Pipe Diameter (ft)	0.33
Avg Flow Rate (cfm)	125

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.

2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft/min = feet per minute.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.

Weekly Mechanical Inspection Log for Capuano Center

GENERAL INFORMATION			
GEI Field Representatives:	S. Slater		
Date:	09/25/07	Start-time of monitoring work:	8:30
Weather:	sunny, 70°	End-time of monitoring work:	8:53
		System Status:	ON

INSTRUMENTATION INFORMATION		
Instrument	PID (ppb)	Manometer (in H_20)
Manufacturer	Pro-Rae Systems	Dwyer
Model	ppb-RAE	Mark III-475-0000 Series
GEI Identification No.	PINE	NA
Calibrant	10 ppm Isobutylene	NA
Successful Calibration	Yes	Zeroed before each reading

FIELD MEASUREMENTS

Shed Secure?	Yes	**Discharge Pressure Port**	
Condensate Accumulated?	No	**Velocity (ft/min)**	NM*
		Pipe Diameter (ft)	0.33
Condensate Drained?	N/A	**Average Flow Rate (cfm)**	NM*

Shed Pressure/VOC Measurements

Port ID	Typical Pressure Range	Pressure (in. H_2O)	Typcial Range of VOCs	VOC (ppb)
Manifold 12	-0.300 to -0.500	-0.362	0 to 2000	0
Maniforld 13	-0.300 to -0.500	-0.375	0 to 5000	0
Manifold 14	-0.300 to -0.500	-0.360	0 to 2000	0
Combined Influent	-0.600 to -0.700	-0.643	0 to 2000	0
Effluent	0.480 to 0.600	0.565	0 to 2000	0

Comments

*Error reading velocity.

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft/min = feet per minute.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.

Weekly SSDS Mechanical Inspection Log for Capuano Center

GENERAL INFORMATION			
GEI Field Representatives:	S. Slater		
Date:	09/30/07	Start-time of monitoring work:	13:30
Weather:	Sunny, 70°	End-time of monitoring work:	14:00
		System Status:	ON

INSTRUMENTATION INFORMATION		
Instrument	PID (ppb)	Manometer (in H_20)
Manufacturer	Pro-Rae Systems	Dwyer
Model	ppb-RAE	Mark III-475-0000 Series
GEI Identification No.	PINE	NA
Calibrant	10 ppm Isobutylene	NA
Successful Calibration	Yes	Zeroed before each reading

FIELD MEASUREMENTS			
Shed Secure?	Yes	**Discharge Pressure Port**	
Condensate Accumulated?	No	**Velocity (ft/min)**	NM
		Pipe Diameter (ft)	0.33
Condensate Drained?	N/A	**Average Flow Rate (cfm)**	NM

Shed Pressure/VOC Measurements

Port ID	Typical Pressure Range	Pressure (in. H_2O)	Typical Range of VOCs	VOC (ppb)
Manifold 12	-0.300 to -0.500	-0.362	0 to 2000	120
Manifold 13	-0.300 to -0.500	-0.378	0 to 5000	150
Manifold 14	-0.300 to -0.500	-0.350	0 to 2000	240
Combined Influent	-0.600 to -0.700	-0.647	0 to 2000	190
Effluent	0.480 to 0.600	0.525	0 to 2000	185

Comments
Flow rate not measured.

Notes:
1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146.
2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft/min = feet per minute.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.

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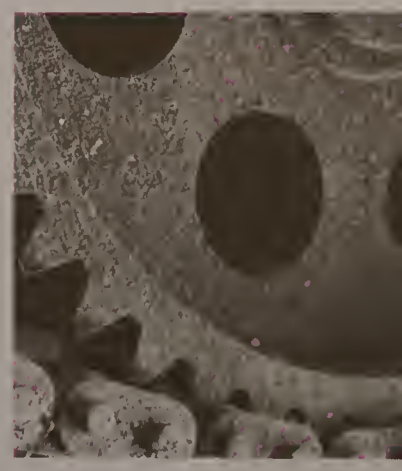
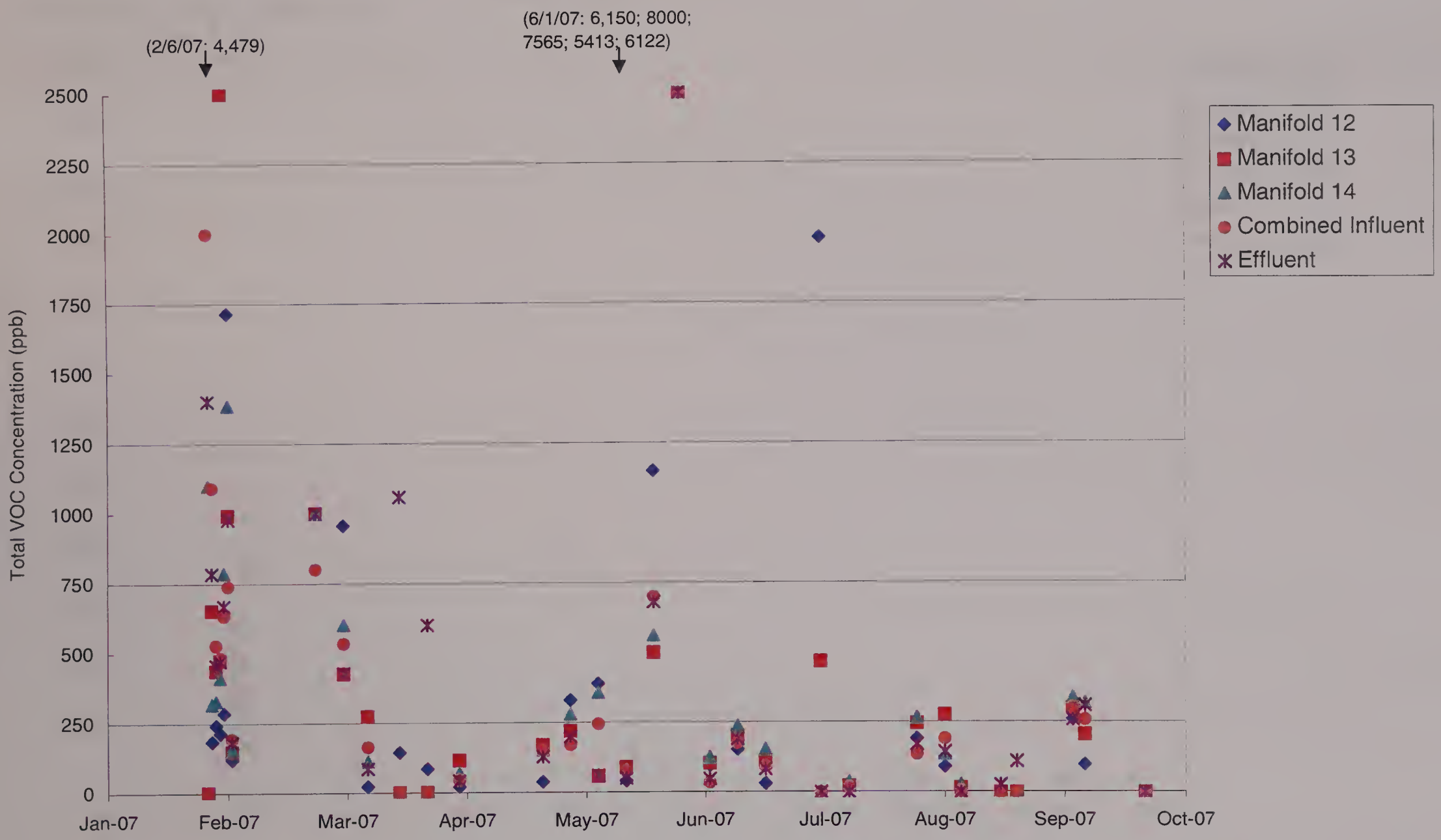


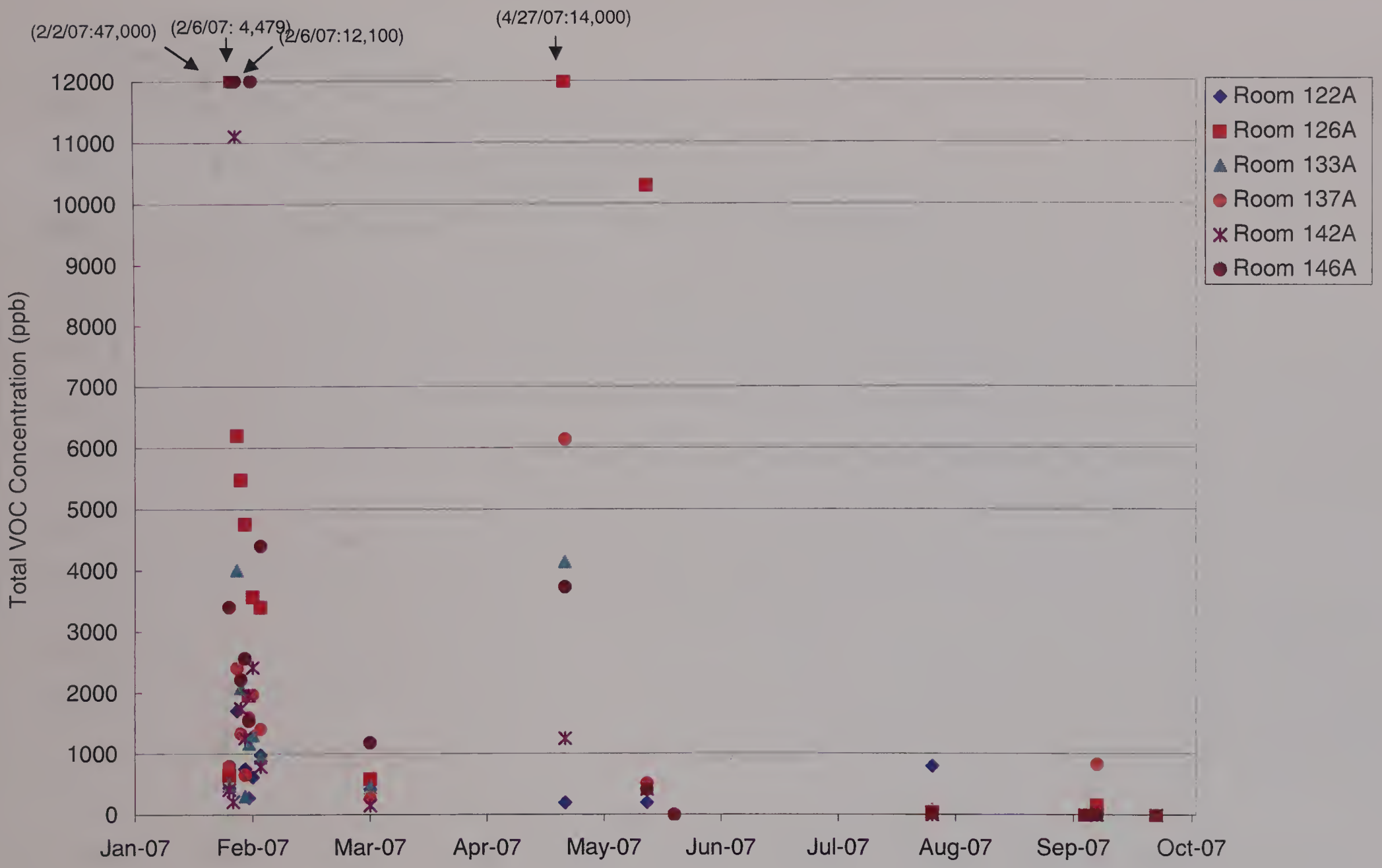
ATTACHMENT C

Graphs of SSDS and Sub-Slab Total VOC Concentrations

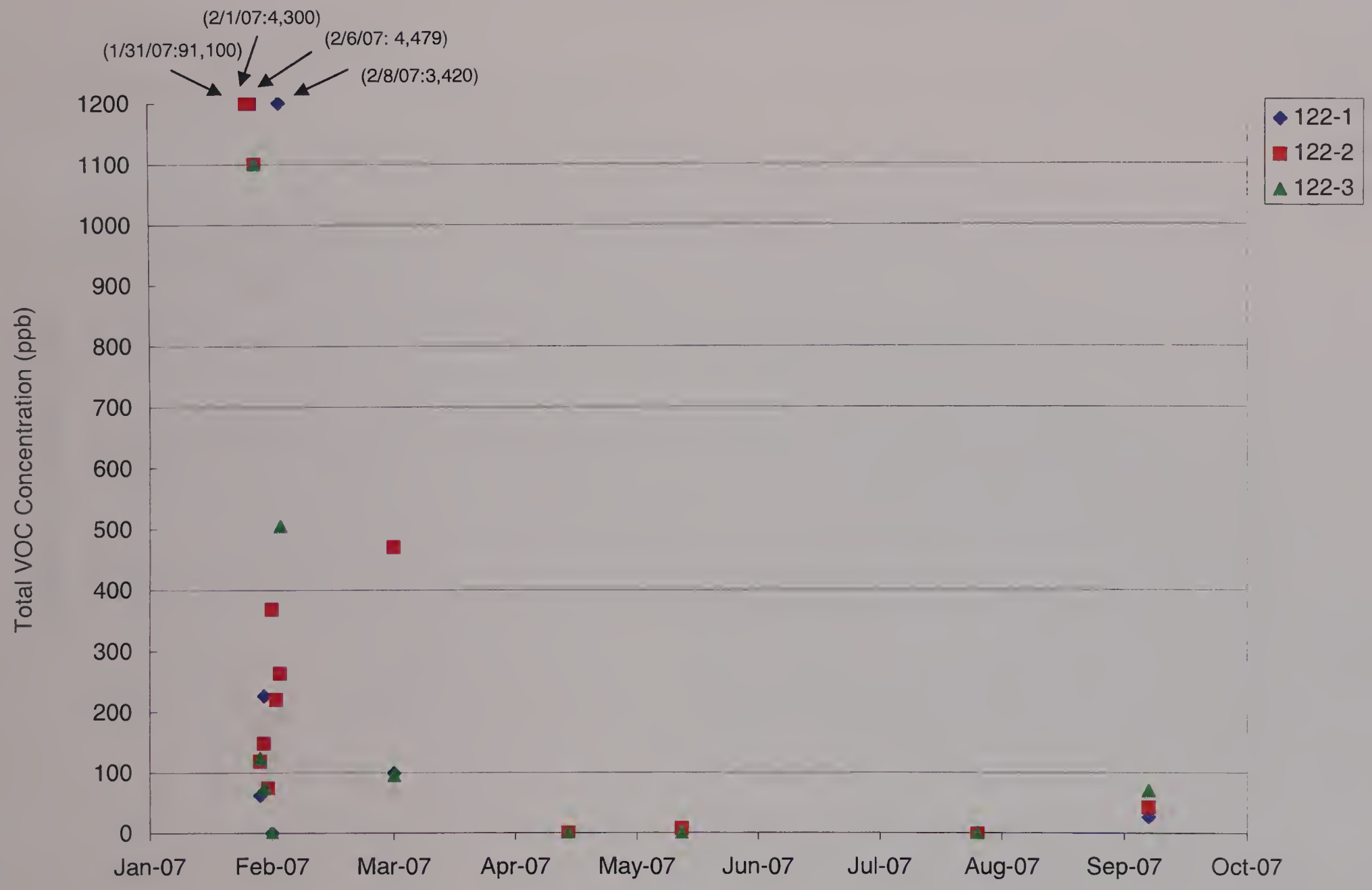
Graph 1
Sub-Slab PID Monitoring Data: January 31, 2007 - September 30, 2007
Total VOC Concentrations by PID at Blower Enclosure Monitoring Points
Capuano Center
Somerville, MA



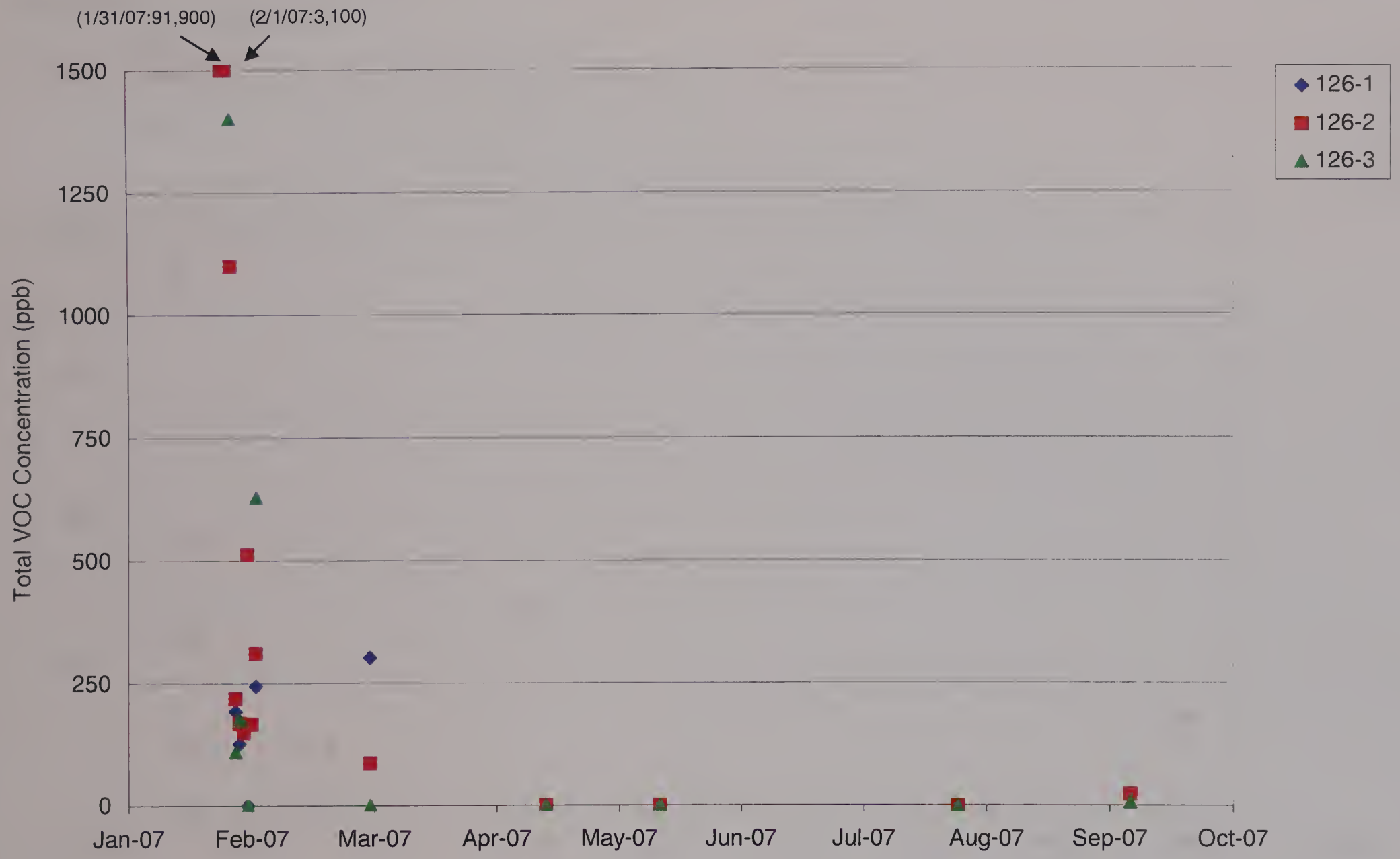
Graph 2
PID Monitoring Data: January 31, 2007 - September 30, 2007
Total VOC Concentrations by PID at Blower Interior Sub-Slab Monitoring Points
Capuano Center
Somerville, MA



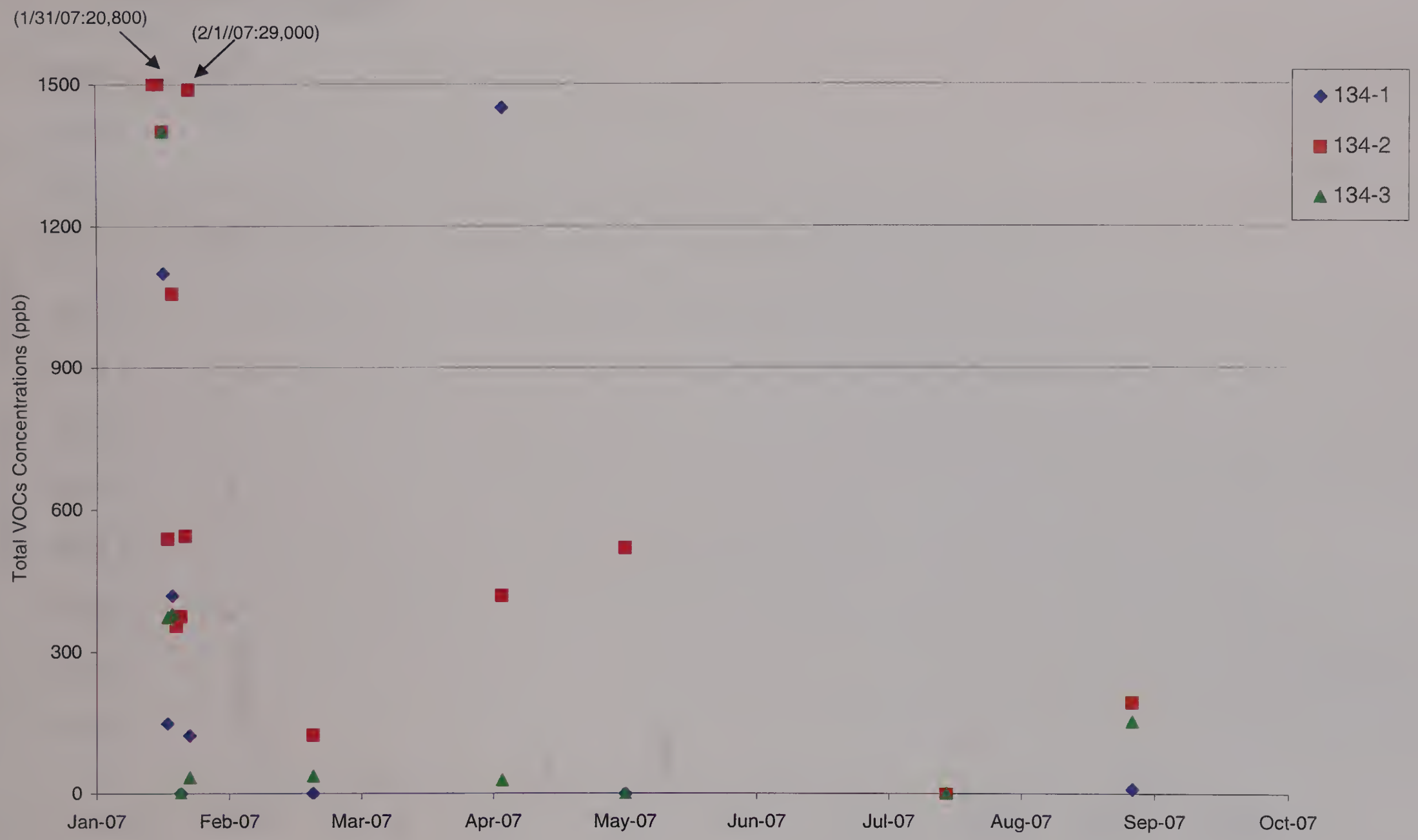
Graph 3
PID Monitoring Data: January 31, 2007 - August 31, 2007
Total VOC Concentrations by PID at Exterior Monitoring Points - Room 122
Capuano Center
Somerville, MA



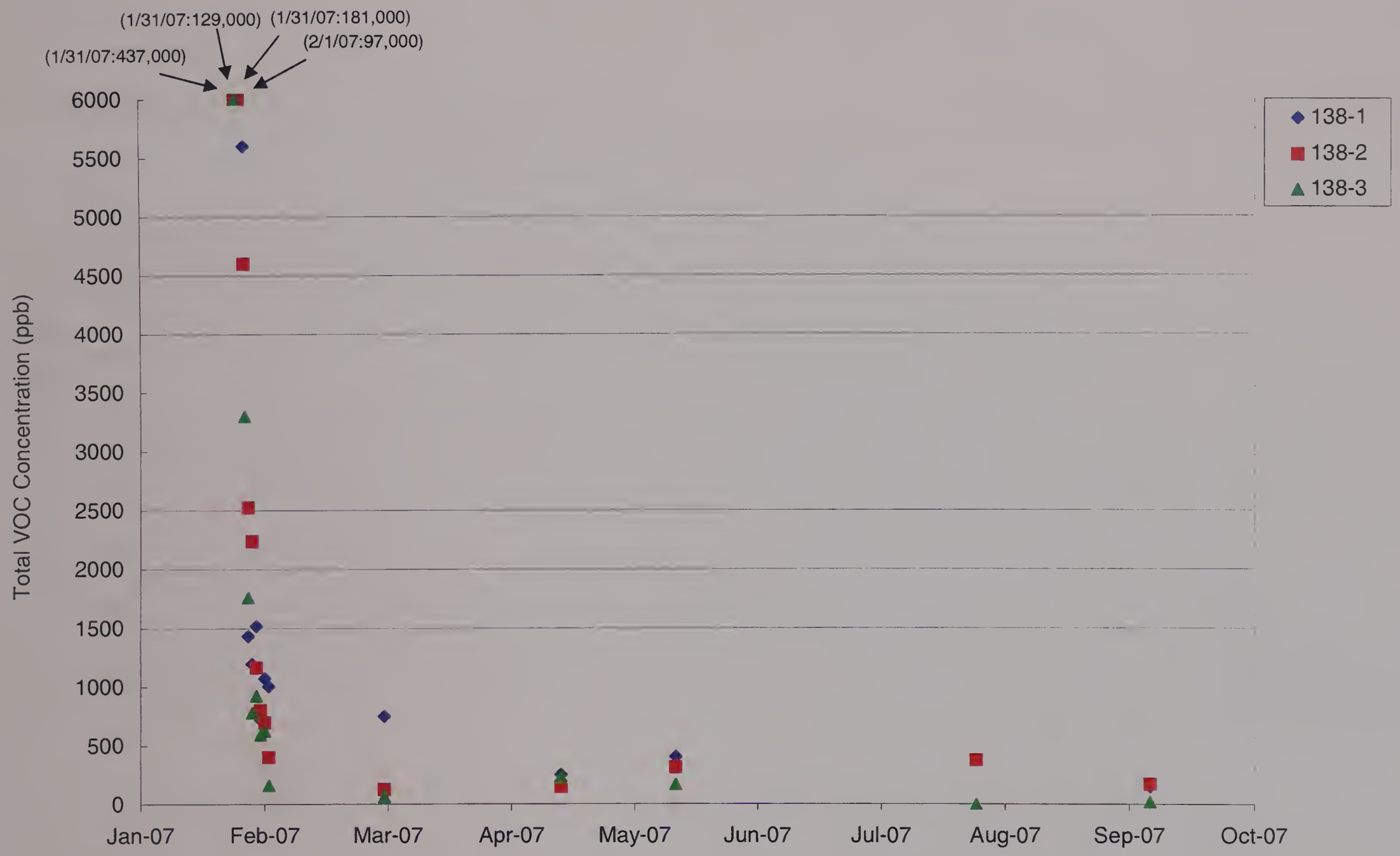
Graph 4
PID Monitoring Data: January 31, 2007 - August 31, 2007
Total VOC Concentrations by PID at Exterior Monitoring Points - Room 126
Capuano Center
Somerville, MA



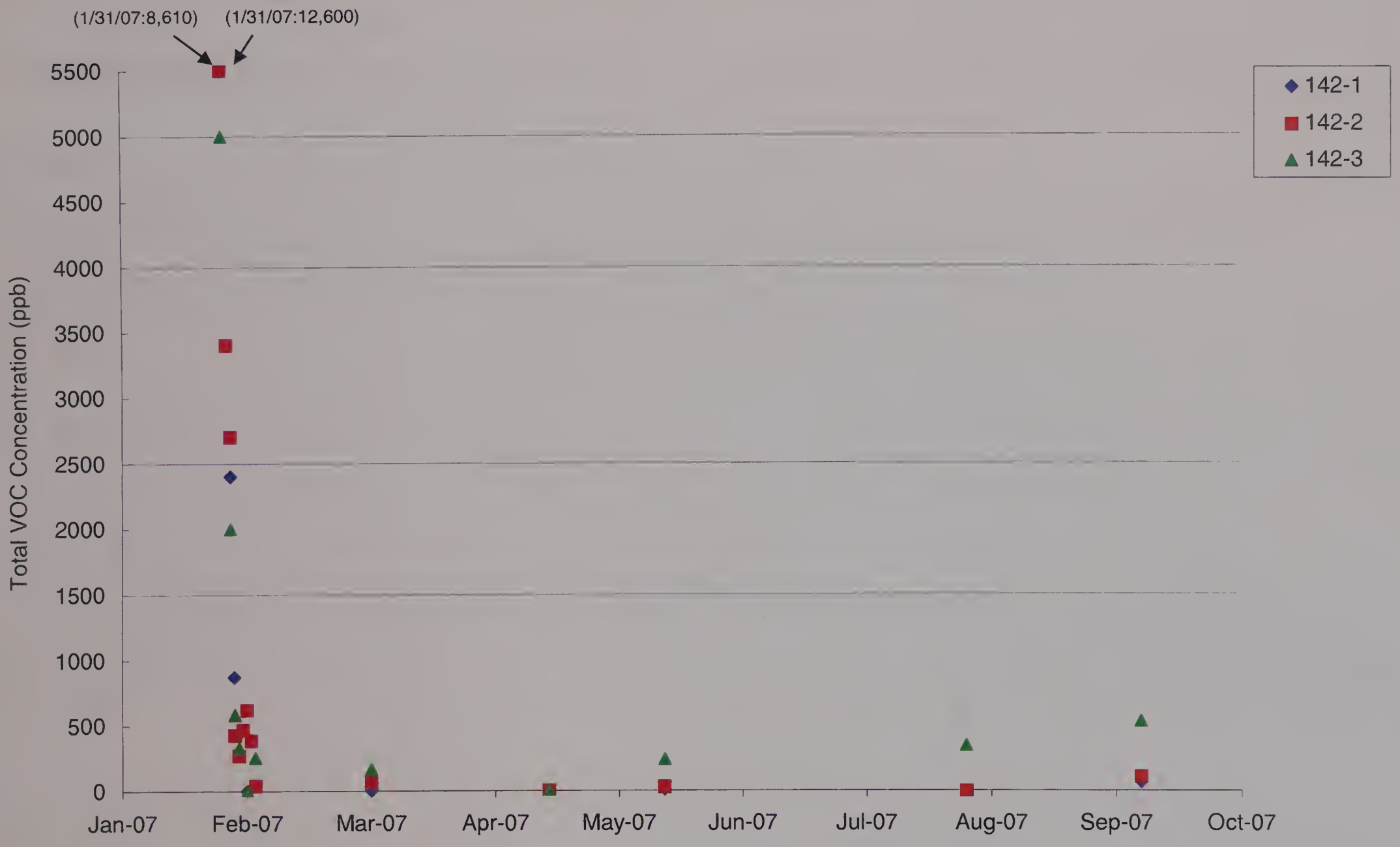
Graph 5
PID Monitoring Data: January 31, 2007 - August 31, 2007
Total VOC Concentrations by PID at Exterior Monitoring Points - Room 134
Capuano Center
Somerville, MA



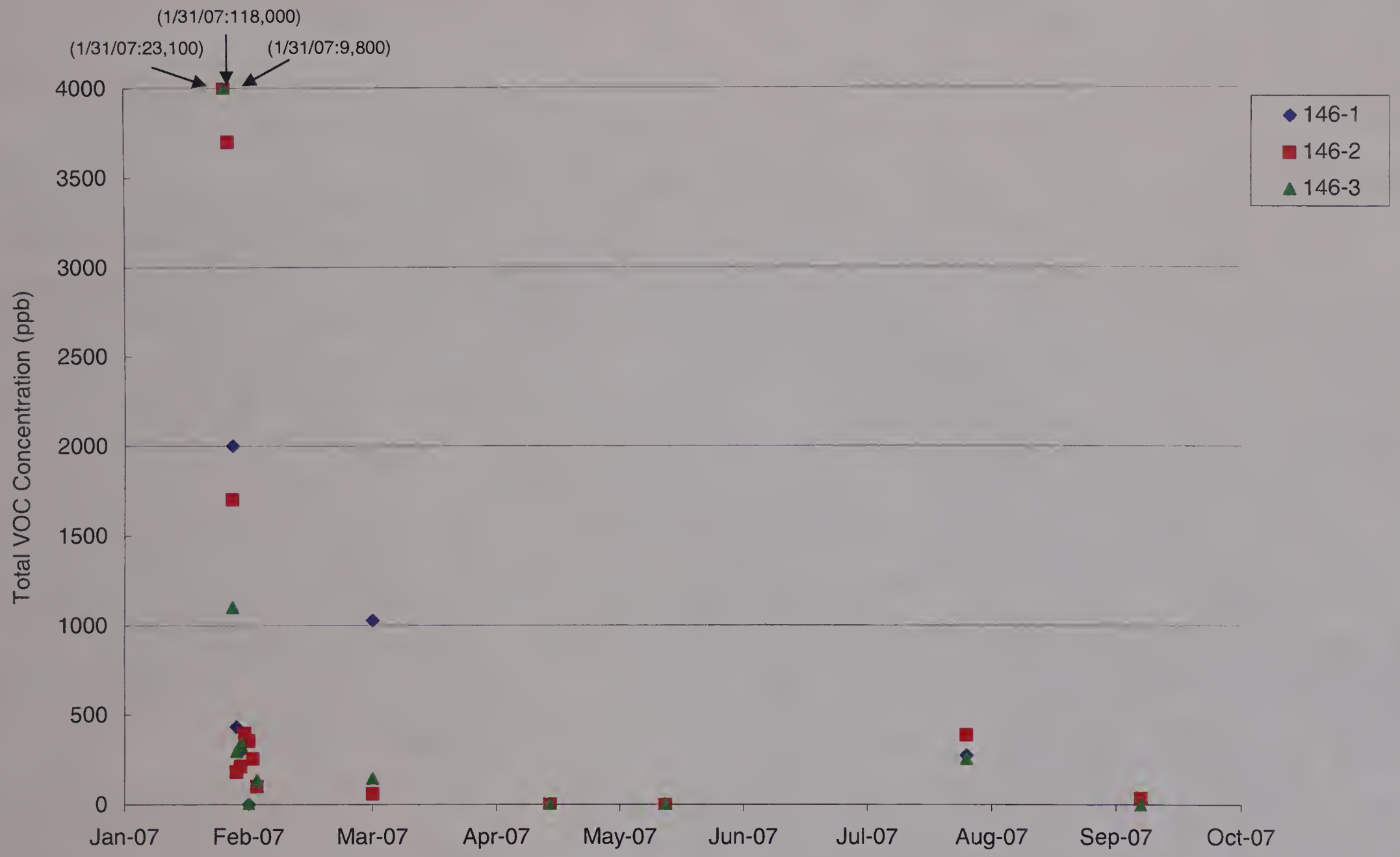
Graph 6
PID Monitoring Data: January 31, 2007 - August 31, 2007
Total VOC Concentrations by PID at Exterior Monitoring Points - Room 138
Capuano Center
Somerville, MA



Graph 7
PID Monitoring Data: January 31, 2007 - August 31, 2007
Total VOC Concentrations by PID at Exterior Monitoring Points - Room 142
Capuano Center
Somerville, MA



Graph 8
PID Monitoring Data: January 31, 2007 - August 31, 2007
Total VOC Concentrations by PID at Exterior Monitoring Points - Room 146
Capuano Center
Somerville, MA



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